WHAT I CLAIM IS:

1. A mill relining apparatus for handling articles within a mill, including: a mast provided with top and bottom engagement members at its respective ends; and an article handling arrangement supported by the mast, wherein the mast is extendible in length so that it can be locked into a substantially upright position within a mill with the bottom engagement member resting on mill charge within the mill or a lower surface of the mill and the top engagement member engaging with an upper surface of the mill.

2. A mill relining apparatus according to claim 1, wherein the article handling arrangement includes a support framework which is pivotally supported by the mast and a boom which extends from the support framework.

3. A mill relining apparatus according to claim 2, wherein the mast includes at least one support to which a part of the support framework may be pivotally connected.

4. A mill relining apparatus according to claim 3, wherein the support(s) of the mast define an axis about which the support framework may pivot relative to the mast and at least one of the supports is configured to be selectively moveable relative to the mast so that the orientation of the pivot axis relative to the mast can be adjusted.

5. A mill relining apparatus according to claim 4, wherein the mast has upper and lower supports each of which has an aperture and the support framework has upper and lower engagement members which are configured to engage into a respective aperture of the upper and lower supports.

6. A mill relining apparatus according to claim 5, wherein the lower support of the mast is selectively moveable relative to the mast.

7. A mill relining apparatus according to any one or claims 2-6, wherein the support framework is in the form of a jib which has upper and lower arms and a support member which extends between the upper and lower arms.

8. A mill relining apparatus according to any one of claims 2-7, wherein the support framework has a plurality of connection points, any one of which the boom may be connected to.

9. A mill relining apparatus according to any one of claims 2-8, wherein a guy wire extends between a part of the support framework and a part of the boom to provide additional support for the boom.

10. A mill relining apparatus according to any one of the claims 2-9, wherein the boom is extendible in length.

11. A mill relining apparatus according to claim 10, wherein the boom includes a first member which is connected to the support framework and a second member which is supported by and moveable relative to the first member.

12. A mill relining apparatus according to claim 11, wherein the first member has an associated roller which engages with the second member and the second member has an associated roller which engages with the first member, the rollers enabling the second member to be moved relative to the first member to adjust the length of the boom.

13. A mill relining apparatus according to any one of claims 2-12, wherein the boom is substantially perpendicular to the mast.

14. A mill relining apparatus according to claim 1, wherein the article handling arrangement includes a boom which is configured to be pivotable substantially vertically and substantially horizontally relative to the mast.

15. A mill relining apparatus according to claim 14, wherein the vertical pivotal movement of the boom relative to the mast is determined by an operable winching system.

16. A mill relining apparatus according to claim 15, wherein the winching system includes a cable which extends between a part of the boom and a winch associated with the mast, the winch being operable to wind or unwind the cable to pivot the boom vertically up or down relative to the mast.

17. A mill relining apparatus according to any one of the claims 14-16, wherein the boom is extendible in length.

18. A mill relining apparatus according to claim 17, wherein the boom includes a first member which is supported by the mast and a second member which is supported by and moveable relative to the first member.

19. A mill relining apparatus according to claim 18, wherein the first member has an associated roller which engages with the second member and the second member has an associated roller which engages with the first member, the rollers enabling the second member to be moved relative to the first member to adjust the length of the boom.

20. A mill relining apparatus according to any one of claims 2-19, wherein a part of the boom is configured with a connection from which articles or auxiliary devices may be supported.

21. A mill relining apparatus according to any one of the preceding claims, wherein the top engagement member provided at an end of the mast is at least partially formed from a material which is resiliently deformable so that it can securely engage with an upper surface of the mill.

22. A mill relining apparatus according to any one of the preceding claims, wherein the bottom engagement member provided at an end of the mast includes one or more tines which are configured to engage into the mill charge.

23. A mill relining apparatus according to any one of claims 1-21, wherein the bottom engagement member provided at an end of the mast is at least partially formed from a material which is resiliently deformable so that it can securely engage with a lower surface of the mill.

24. A mill relining apparatus according to any one of the preceding claims, wherein there are one or more additional article handling arrangements supported by the mast.

25. A mill relining apparatus according to claim 24, wherein there are two article handling arrangements supported on opposite sides of the mast.

26. A mill relining apparatus according to any one of the preceding claims, wherein the mast has a base mast part and an extension mast part, the extension mast part being movable relative to the base mast part so that the length of the mast can be adjusted.

27. A mill relining apparatus according to claim 26, wherein a hydraulic system is coupled to the base mast part and extension mast part and is operable to move the extension mast part relative to the base mast part to alter the length of the mast.

28. A mill relining apparatus according claim 27, wherein the hydraulic system includes an accumulator which is configured to maintain the mast at a particular length as desired.

29. A mill relining apparatus according to claim 1, wherein the article handling arrangement is any one of the following: a robot handling arm, grapple, or other auxiliary device.

30. A mill relining apparatus according to claim 1, wherein the article handling arrangement extends from the mast at a fixed angle and the mast is arranged to be rotatable relative to the top and bottom engagement members so that the article handling arrangement can be moved.

31. An unassembled mill relining apparatus, including: a mast which is extendible in length; top and bottom engagement members which are each connectable or connected to respective ends of the mast; and an article handling arrangement which is connectable to the mast.

32. An unassembled mill relining apparatus according to claim 31, wherein the article handling arrangement includes a support framework and a boom which is extendible in length, the support framework being connectable to the mast and the boom being connectable to the support framework.

33. An unassembled mill relining apparatus according to claim 32, further including a guy wire which is connectable between a part of the support framework and a part of the boom.

34. An unassembled mill relining apparatus according to claim 31, wherein the article handling arrangement includes a boom which is extendible in length, the boom being connectable to a part of the mast.

35. An unassembled mill relining apparatus according to claim 34, further including an operable winching system which is connectable between a part of the mast and a part of boom.

36. An unassembled mill relining apparatus according to any one of claims 31-35, further including one or more additional article handling arrangements which are connectable to the mast.

37. An unassembled mill relining apparatus according to any one of claims 31-36, where the mast has a base mast part and an extension mast part which can be coupled together to allow the extension mast part to be movable relative to the base mast part so that the length of the mast can be adjusted.

38. An unassembled mill relining apparatus according to claim 37, further including a hydraulic system which may be coupled to the base mast part and extension mast part to facilitate movement of the extension mast part relative to the base mast part to alter the length of the mast.

39. A method of handling articles when relining a mill including: providing an extendible mast; resting a bottom engagement member of the mast on mill charge within the mill or a lower surface of the mill; extending the mast so that a top engagement member of the mast engages with an upper surface of the mill to thereby lock the mast in a substantially upright position; connecting one or more article handling arrangements to the mast; and operating the article handling arrangement(s) to handle one or more articles within the mill.

40. A method of handling articles when relining a mill according to claim 39, wherein the top and bottom engagement members are connected to respective ends of the mast prior to resting the bottom engagement member of the mast on mill charge within the mill or a lower surface of the mill.

41. A method of handling articles when relining a mill according to claim 39, wherein an end of the mast is connected to the bottom engagement member after the bottom engagement member has been rested on mill charge within the mill or a lower surface of the mill.

42. A method of handling articles when relining a mill according to any one of claims 39-41, including connecting two article handling arrangements to the mast and operating the article handling arrangements on opposite sides of the mill to handle one or more articles within the mill.